

1. Web Essentials: Clients, Servers, and Communication

Puzzle:

In Java, which class would you use to create a basic HTTP server that listens on a specific port and responds to client requests?

- A) `HttpClient`
- B) `HttpServer`
- C) `WebClient`
- D) `ServerSocket`

(Answer: B) `HttpServer`

2. The Internet - World Wide Web

Question:

What Java class is used to send HTTP requests and retrieve responses in modern Java (Java 11+)?

- A) `URLConnection`
- B) `HttpRequest`
- C) `HttpClient`
- D) `ApacheHttpClient`

(Answer: C) `HttpClient`

3. HTTP Request Message

Code Puzzle:

What will the following Java code print when making an HTTP GET request?

```
java
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HttpClient client = HttpClient.newHttpClient();
HttpRequest request = HttpRequest.newBuilder()
    .uri(URI.create("http://example.com"))
    .GET()
    .build();
HttpResponse<String> response = client.send(request,
    HttpResponse.BodyHandlers.ofString());
```

```
System.out.println(response.statusCode());
```

- A) The status code of the HTTP response
- B) The HTML content of the page
- C) An error message
- D) Nothing

(Answer: A) The status code of the HTTP response

4. HTTP Response Message

Question:

Which of the following is NOT a valid HTTP response status code?

- A) 200 OK
- B) 301 Moved Permanently
- C) 452 Authentication Required
- D) 503 Service Unavailable

(Answer: C) 452 Authentication Required (not a valid HTTP status code)

5. Web Clients and Web Servers

Puzzle:

Which Java technology is commonly used to build web servers?

- A) JavaFX
- B) Spring Boot
- C) Swing
- D) Hibernate

(Answer: B) Spring Boot

6. HTML5 - Tables and Lists

Code Puzzle:

What will be the output of this Java snippet that generates an HTML list?

```
java
```

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```
String html = "<ul><li>Item 1</li><li>Item 2</li><li>Item  
3</li></ul>";  
System.out.println(html);
```

- A) A numbered list with three items
- B) A bulleted list with three items
- C) An error due to incorrect syntax
- D) A plain text output

(Answer: B) A bulleted list with three items

7. External Stylesheets - Rule Cascading

Question:

In CSS, which rule has the highest specificity?

- A) Class selector (.example) in an external stylesheet
- B) ID selector (#example) in an external stylesheet
- C) Inline style (**style="color: red;"** in an HTML element)
- D) Universal selector (*) in an external stylesheet

(Answer: C) Inline style (style="color: red;" in an HTML element)

8. Border Images, Colors, and Shadows

Code Puzzle:

What will the following CSS properties do?

CSS

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```
border-image: url("border.png") 30 round;  
box-shadow: 10px 10px 5px grey;
```

- A) Adds a background image and text shadow
- B) Sets an image as a border and applies a shadow around the element
- C) Applies only a border color and text transformation
- D) Sets a text animation effect

(Answer: B) Sets an image as a border and applies a shadow around the element

9. Text Transformations and Animations

Question:

In CSS, what property is used to change text to uppercase?

- A) text-style
- B) text-transform
- C) text-decoration
- D) text-uppercase

(Answer: B) text-transform

10. Bootstrap Framework

Puzzle:

Which Bootstrap class is used to make an image responsive?

- A) .img-fluid
- B) .responsive-img
- C) .img-responsive
- D) .image-fluid

(Answer: A) .img-fluid

Would you like me to tweak the difficulty or add more coding-based puzzles? 🚀